

REMARKS

Applicants respectfully acknowledge receipt of the Final Office Action mailed April 18, 2006. Applicants would like to thank the Examiner for conducting a telephonic interview on September 13, 2006.

In the Final Office Action, the Examiner: (1) rejected claims 2 and 11 under 35 U.S.C. § 102(e) as being anticipated by *Schmitt* (U.S. Patent Pub. No. 2004/0052972); (2) rejected claims 3 and 12 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Xi et al.* (U.S. Patent Pub. No. 2003/0198754); (3) rejected claims 6, 7, 13, 14, and 17 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Rossmann* (U.S. Pub. No. 2003/0211735); and (4) rejected claims 8, 9, 15, 16, and 18 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Xi*, and further in view of *Rossmann*.

By this Amendment, Applicants amend claims 2 and 11. After entry of this Amendment, claims 2, 3, 6-9, and 11-18 will remain pending. Of these claims, claims 2 and 11 are independent. Claims 1, 4, 5, and 10 were previously canceled, without prejudice or disclaimer, in the Amendment filed February 14, 2006.

The originally-filed specification, claims, abstract, and drawings fully support the amendments to claims 2 and 11. No new matter has been introduced.

Based on the forgoing amendments, Applicants traverse the rejections above and respectfully request reconsideration for at least the reasons that follow.

I. 35 U.S.C. § 102(e) REJECTION

Claims 2 and 11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Schmitt*. Applicants respectfully disagree with the Examiner's arguments and

conclusions and submit that independent claims 2 and 11 are patentably distinguishable over *Schmitt* at least for the reasons set forth below.

In order to properly establish that *Schmitt* anticipates Applicants' claimed invention under 35 U.S.C. § 102, each and every element of each of the claims in issue must be disclosed, either expressly or under principles of inherency, in that single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Schmitt discloses an apparatus for use in CVD or ALD including an outer enclosure 11, reactive enclosures 24 and 34 having reactive zones 2 and 3, gas inlet pipes 20 and 30, a neutral gas inlet 40, a buffer zone 6, substrates 8, a rotary turntable 7, and an exhaust pipe 55. (*Schmitt*, section [0024]-[0031] and FIGs. 2 and 3).

Schmitt, however, fails to teach or suggest wherein a second exhaust mechanism, i.e., the exhaust pipe 55 as alleged by the Examiner, is provided in a wall of a process chamber (emphasis added). Additionally, *Schmitt* fails to disclose a second exhaust mechanism for exhausting a gas which removes reaction products remaining in the process chamber after plasma processing.

Accordingly, with respect to independent claims 2 and 11, *Schmitt* fails to teach or suggest Applicants' claimed invention, including, *inter alia*:

"a second exhaust mechanism...provided in a wall of the process chamber, and configured to exhaust the second gas inside of the process chamber after the plasma processing, the second gas removing reaction products remaining in the process chamber" (emphases added).

The Examiner, therefore, has not met the essential criteria for showing anticipation, wherein “each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in...a...single reference.” See M.P.E.P. § 2131. Accordingly, independent claims 2 and 11 are patentable over *Schmitt*. Applicants therefore request that the rejection of claims 2 and 11 under 35 U.S.C. § 102(e) be withdrawn.

II. 35 U.S.C. § 103(a) REJECTIONS

Applicants respectfully traverse the rejection of claims 3 and 12 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Xi*; the rejection of claims 6, 7, 13, 14, and 17 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Rossman*; and the rejection of claims 8, 9, 15, 16, and 18 under 35 U.S.C. § 103(a) as being unpatentable over *Schmitt* in view of *Xi*, and further in view of *Rossman*. The shortcomings of *Schmitt* are discussed above.

With respect to *Xi*, the Examiner alleges “*Xi* et al teach an apparatus...that includes a process chamber 10 with dual exhausts 18A, 18B, substrate support pedestal 46[,],...a lift assembly 48...[and] a controller 70...” (*Office Action*, p. 4, line 20 - p. 5, ll. 1-4). Additionally, the Examiner states “*Rossman* teaches a substrate processing apparatus (Figures 6, 7A) comprising: a process chamber 113 in which a substrate 117 is plasma-processed; a gas introducing mechanism 133;...a first exhaust path...72[:];...a second exhaust path...70;...a system controller 160[:]; and [a] computer program 163...” (*Id.* at p. 5, ll. 14-22).

Such teachings, even if present in *Xi* and *Rossman*, however, fail to teach or suggest, at least, “a second exhaust mechanism...provided in a wall of the process

chamber, and configured to exhaust the second gas inside of the process chamber after the plasma processing, the second gas removing reaction products remaining in the process chamber,” as required by Applicants’ claims 2 and 11 (emphases added). Thus, *Xi* and *Rossman* also fail to overcome the above noted shortcomings of *Schmitt*, and claims 3, 6-9, and 12-18 are allowable at least due to their corresponding dependence from independent claims 2 and 11.

III. CONCLUSION

Applicants respectfully submit that independent claims 2 and 11 are in condition for allowance. In addition, claims 3, 6-9, and 12-18 are in condition for allowance at least due to their corresponding dependence from independent claims 2 and 11.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: September 21, 2006

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